UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/312,121	05/14/1999	TIMOTHY HALL ADDINGTON	A-5035	2127

5642   7590   01/05/2004

SCIENTIFIC-ATLANTA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
5030 SUGARLOAF PARKWAY
LAWRENCEVILLE, GA 30044

EXAMINER
SHANG, ANNAN Q

ART UNIT	PAPER NUMBER
2614	

14

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 03 December 2003.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-32 is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-32 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

　　a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4)☐ Interview Summary (PTO-413) Paper No(s). _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

Response to Amendment

1.   Applicant's request for reconsideration of the finality of the rejection of the last

Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-32, are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fijolek et al (6,510,162) in view of **Maeshima et al (6,092,113).**

As to claim 1, note the **Fijolek et al** reference figures 1 and 2, disclose a system

and method for managing channel usage in a data over cable system and further

disclose a method for transporting Internet Protocol (IP) data over a subscriber

television system including a headend, a transmission network, and a plurality of Home

Communication Terminals (HCT), with at least one HCT authorized for receiving the IP

data. The claimed method comprising the steps of...is met as follows: the claimed

"establishing..." is met by Headend or TRTS 26, note figures 1, 7 and col. 4, lines 40-57

and col. 5, line 43-col. 6, line 12, note that the Headend or TRTS 26 establishes a

connection for transporting IP data from a server, DHCP proxies 15, in the Headend or

TRTS 26 to the external, Data Net 28, which is different from the transmission network,

Cable Net 14, where the DHCP proxies 15, in the Headend receives, via PSTN 22 or

Cable Net 144, at the Headend 26 a request for an IP connection from an authorized

HCT, Customer Premise Equipment (CPE) 18 via Cable Modem (CM) 16, note col. 5,

lines 7-29 and line 66-col. 6, line 12, the claimed "assigning at the Headend an IP..." is

met by the DHCP 15, note col. 6, lines 1-12, note that the DHCP 15 assigns IP address

to the authorized HCT, CM 16 for the duration of the IP connection, the claimed

"establishing a route for IP data...is met by Headend 26, note figures 4, 5 and col. 11,

lines 8-col. 12, line 8, note that Headend establishes a route for the IP data from HCT,

CM 16, to the server, DHCP server 15 which assigns addresses and from the DHCP

server 15 to the CM 16 over the transmission network, Cable Net 14, where at least a

portion of the route for IP data is adapted to carry a plurality of IP datagrams destined

for a plurality of unicast IP addresses, note col. 7, line 52-col. 8, line 12 and line 25-45,

note further that the CM 16 after initialization, note col. 9, lines 13-44, establishes an IP

link to TRAC 24 and begins upstream communications with CMTS 12 via DHCP layer

66 at the Headend 26, to complete a virtual data connection that allows CM 16 to

receive data from Data Net 28 via CMTS 12 and the Cable Net 14, and send return data

to Data Net 28 via TRAC 24 and PSTN 22, transmitting from the TRAC 24 at Headend

26 to the CM 16, information regarding the route for the IP connection, note col. 8, lines

25-45, and communicating between the CM 16 and the external network, Data Net 28,

via the route and the subnet connection, and releasing the route and assigned IP

address upon termination of the IP connection, note col. 7, lines 18-64.

Fijolek fails to explicitly teach establishing a subnet connection for transporting IP

data from a server in the headend to the external network.

However, note **Maeshima et al** reference figure 1, disclose method for

constructing a virtual private network (VPN), logical connection "subnet connection"

where an IP tunnel is constructed, between routers connected with the Internet, by

setting up a reservation resource protocol (RSVP) on the IP tunnel (figs. 9(a), 9(b), 10,

col. 3, lines 1-33 and col. 4, lines 45-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to incorporate the teaching of Maeshima into the system of Fijolek in

order to provide a logical connection or virtual connection by virtually constructing a

dedicated line(s) on the Internet between Client(s) and specific server(s) to assure

and/or reserve bandwidth in each host and/or in each sub-network or each Subscriber.

As to claim 2, Fijolek further discloses where the IP data is encapsulated and

communicated between the CM 16 and Headend or TRTS 26, within the digital data

stream that includes television programming, note col. 4, lines 25-35, col. 6, lines

15-54 and col. 7, lines 18-33.

As to claim 3, Fijolek further discloses where the IP data is encapsulated into

Motion Picture Experts Group (MPEG), transport packets, col. 6, lines 15-54, col. 7,

lines 18-33 and col. 9, line 19-35.

As to claim 4, Fijolek further discloses where the IP address includes correlating

the assigned IP address to Media Access Control (MAC) address associated with the

CM 16, note col. 6, line 55-col. 7, line 2.

As to claim 5, Fijolek further discloses where the step of establishing the route for

the IP data includes establishing and using a portion of a continuous feed session for IP

data from the DHCP server 15 to the authorized CM 16, note col. 18, line 66-col. 19,

line 21, note that the DHCP server 15 directs and coordinates the flow of data, with he

various IP data, between the Headend 26 and the CM 16 and creates a continuous feed

session within the Cable Net system.

As to claim 6, Fijolek further discloses where the step of establishing and

releasing the route for IP data comprises, Digital Storage Media-Command and Control

(DSM-CC) signaling techniques, note col. 7, lines 18-66 and col. 12, lines 35-64.

As to claim 7, Fijolek further discloses where establishing a route includes using

a protocol for the IP data from the authorized CM 16 to DHCP 15, using slot allocation,

note figure 7 and col. 18, line 60-col. 19, line 21.

As to claim 8, Fijolek further discloses where establishing a route for IP data

includes establishing and using a session key uniquely associated with the route, note

col. 7, lines 18-32.

As to claim 9, note the **Fijolek et al** reference figures 1 and 2, disclose a system

and method for managing channel usage in a data over cable system and further

disclose a method for transporting Internet Protocol (IP) data over a subscriber

television system including a headend, a transmission network, and a plurality of Home

Communication Terminals (HCT), with at least one HCT authorized for receiving the IP

data. The claimed method comprising the steps of...is met as follows: the claimed

"establishing connection..." is met by Headend or TRTS 26, note figures 1, 7 and col. 4,

lines 40-57 and col. 5, line 43-col. 6, line 12, note that the Headend 26 establishes a

connection for transporting IP data from a server, DHCP proxies 15, in the Headend 26

to the external, Data Net 28, which is different from the transmission network, Cable Net

14, where the DHCP proxies 15, in the Headend receives, via PSTN 22 or Cable Net

144, at the Headend 26 a request for an IP connection from an authorized HCT,

Customer Premise Equipment (CPE) 18 via Cable Modem (CM) 16, note col. 5, lines 7-

29 and line 66-col. 6, line 12, where the DHCP proxies 15, in the Headend receives, via

PSTN 22 or Cable Net 144, at the Headend 26 a request for an IP connection from an

authorized HCT, Customer Premise Equipment (CPE) 18 via Cable Modem (CM) 16,

note col. 5, lines 7-29 and line 66-col. 6, line 12, which includes a Media Access Control

(MAC) address associated with the HCT, CM 16 and CPE 18, note figure 6, col. 6, line

64-line 7 and col. 17, line 53-col. 18, line 2, the claimed "assigning at the Headend an

IP..." is met by the DHCP 15, note col. 6, lines 1-12, note that the DHCP 15 assigns IP

address to the authorized HCT, CM 16 for the duration of the IP connection, the claimed

"maintaining in a database in the headend..." is inherent to the DHCP 15, note col. 6,

lines 1-12 and lines 55-67, note that in order for the DHCP tell which computer device to

assigning IP address the DHCP maintains a database in the Headend and to enable it

to map the various physical addresses, MAC addresses of the Cable Net advices, CM

16 to the various assigned addresses by DHCP 15, and further to enable bi-directional

communication between the Cable Net 14 and Data Net 28, note col. 4, lines 40-54, the

claimed "establishing a route for IP data...is met as follows; the HCT, CM 16 after

initialization, note col. 9, lines 13-44, establishes an IP link to TRAC 24 and begins

upstream communications with CMTS 12 via DHCP server layer 66 at the Headend 26,

to complete a virtual data connection that allows CM 16 to receive data, within a

downstream bandwidth, from Data Net 28 via CMTS 12 and the Cable Net 14, and send

return data to Data Net 28 via TRAC 24 and PSTN 22, note figures 4, 5 and col. 11,

lines 8-col. 12, line 8, and further the downstream bandwidth includes at least a portion

of a television program, and the downstream route for IP data is adapted to carry a

plurality of IP datagrams destined for a plurality of unicast IP addresses, note col. 7, line

52-col. 8, line 12, line 25-45, Headend 26, further establishes an upstream route for IP

data from the authorized HCT, CM 16, the server, DHCP 15, over the transmission

network, Cable Net 14, within an upstream bandwidth, where the upstream route uses a

protocol selected from data slot allocation, note figure 7 and col. 18, line 60-col. 19, line

21, and transmitting from the Headend 26, to the HCT, CM 16 information regarding the

downstream route and the upstream route for the IP connection, where the Headend

26, communicates the IP data between the CM 16 and the server, DHCP 15 via the

downstream route, Cable Net 14 and the upstream route PSTN 22 or Cable Net 14,

where the IP data is encapsulated into packets, note 7, lines 18-66, and Communicates

the IP data between the server, DHCP 15, and the external network, Data Net 28, and

releasing the assigned IP address, the downstream route and the upstream route upon

termination of the IP connection, note 7, lines 18-66.

Fijolek fails to explicitly teach establishing a subnet connection for transporting IP

data from a server in the headend to the external network.

However, note **Maeshima et al** reference figure 1, disclose method for

constructing a virtual private network (VPN), logical connection "subnet connection"

where an IP tunnel is constructed, between routers connected with the Internet, by

setting up a reservation resource protocol (RSVP) on the IP tunnel (figs. 9(a), 9(b), 10, col. 3, lines 1-33 and col. 4, lines 45-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Maeshima into the system of Fijolek in order to provide a logical connection or virtual connection by virtually constructing a dedicated line(s) on the Internet between Client(s) and specific server(s) to assure and/or reserve bandwidth in each host and/or in each sub-network or each Subscriber.

As to claim 10, note the **Fijolek et al** reference figures 1 and 2, disclose a system and method for managing channel usage in a data over cable system and further disclose a method of creating and removing Internet Protocol data communication paths within a television system. The claimed method comprising...is met as follows: the claimed "establishing a connection..." is met by Headend or TRTS 26, note figures 1, 7 and col. 4, lines 40-57 and col. 5, line 43-col. 6, line 12, note that the Headend 26 establishes a connection for transporting IP data from a server, DHCP proxies 15, in the Headend 26 to the external, Data Net 28, which is different from the transmission network, Cable Net 14, where the DHCP proxies 15, in the Headend receives, via PSTN 22 or Cable Net 144, at the Headend 26 a request for an IP connection from an authorized HCT, Customer Premise Equipment (CPE) 18 via Cable Modem (CM) 16, note col. 5, lines 7-29 and line 66-col. 6, line 12, the claimed "establishing a continuous feed session..." is met by Headend 26, note col. 18, line 66-col. 19, line 21, note that the DHCP server 15 directs and coordinates the flow of data, with he various IP data, between the Headend 26 and the CM 16 and creates a

continuous feed session within the Cable Net system, where the DHCP proxies 15, in

the Headend receives, via PSTN 22 or Cable Net 144, at the Headend 26 a request for

an IP connection from an authorized HCT, Customer Premise Equipment (CPE) 18 via

Cable Modem (CM) 16, note col. 5, lines 7-29 and line 66-col. 6, line 12, the claimed

"assigning at the Headend an IP..." is met by the DHCP 15, note col. 6, lines 1-12, note

that the DHCP 15 assigns IP address to the authorized HCT, CM 16 for the duration of

the IP connection, the claimed "designating a route for IP data... is met by Headend 26,

note figures 4, 5 and col. 11, lines 8-col. 12, line 8, note that Headend designates a

route for the IP data from HCT, CM 16, to the server, DHCP server 15 which assigns

addresses and from the DHCP server 15 to the CM 16 over the transmission network,

Cable Net 14, where at least a portion of the route for IP data is adapted to carry a

plurality of IP datagrams destined for a plurality of unicast IP addresses, note col. 7, line

52-col. 8, line 12 and line 25-45, note further that the CM 16 after initialization, note col.

9, lines 13-44, establishes an IP link to TRAC 24 and begins upstream communications

with CMTS 12 via DHCP layer 66 at the Headend 26, to complete a virtual data

connection that allows CM 16 to receive data from Data Net 28 via CMTS 12 and the

Cable Net 14, and send return data to Data Net 28 via TRAC 24 and PSTN 22,

transmitting from the TRAC 24 at Headend 26 to the CM 16 information regarding the

route for the IP connection, note col. 8, lines 25-45, and communicating between the

CM 16 and the external network, Data Net 28, via the route and the subnet connection,

and releasing the route and assigned IP address upon termination of the IP connection,

note col. 7, lines 18-64.

Fijolek fails to explicitly teach establishing a subnet connection for transporting IP data from a server in the headend to the external network.

However, note **Maeshima et al** reference figure 1, disclose method for constructing a virtual private network (VPN), logical connection "subnet connection" where an IP tunnel is constructed, between routers connected with the Internet, by setting up a reservation resource protocol (RSVP) on the IP tunnel (figs. 9(a), 9(b), 10, col. 3, lines 1-33 and col. 4, lines 45-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Maeshima into the system of Fijolek in order to provide a logical connection or virtual connection by virtually constructing a dedicated line(s) on the Internet between Client(s) and specific server(s) to assure and/or reserve bandwidth in each host and/or in each sub-network or each Subscriber.

Claim 11 is met as previously discussed with respect to claim 6.

As to claim 12, note the **Fijolek et al** reference figures 1 and 2, disclose a system and method for managing channel usage in a data over cable system and further disclose an application server for establishing, using, and deleting an Internet Protocol data communications route within a television system between the application server and an authorized Home Communications Terminal and between the application server and an external network. The claim application server comprising... is met as follows: the claimed "means for establishing...." is inherent to DHCP proxies 15, note figures 1, 7 and col. 4, lines 40-57 and col. 5, line 43-col. 6, line 12, note that the DHCP proxies 15, is a means for establishing a communication route between an

external network, Data Net 28, and the application server, DHCP proxies 15, located in

the Headend or TRTS 26 of the television system, Cable Net 14, for communicating

Internet Protocol (IP) data between the DHCP proxies 15, and Data Net 28, using an IP

address from the DHCP proxies 15, and releasing the external communication route,

note col. 7, lines 18-66, the claimed "a processor..." is inherent to DHCP proxies 15,

note figures 6, 7 and col. 11, line 55-col. 12, line 42, note that the processor within the

DHCP 15 after receiving a request from Cable Modem (CM) 16 for connection to

external network, Data Net 28, requests the establishment of an internal

communications route between the CM 16 requesting an IP connection and DHCP

proxies 15, for the duration of the IP connection, for releasing the internal

communications route upon termination of the IP connection, note col. 7, lines 11-66,

and for communicating the IP data between the CM 16 and DHCP proxies 15, over the

internal communications route, wherein the IP address for communicating with the

external network, Data Net 28, is associated with the CM 16, for the duration of the IP

connection and is released upon termination of the IP connection, where a portion of the

internal communications route is adapted to carry a plurality of IP datagrams destined

for a plurality of unicast IP addresses, note col. 7, line 52-col. 8, line 12, line 25-45, the

claimed "means for encapsulating and unencapsulating the IP data...is inherent to

DHCP proxies 15, note col. 7, lines 18-57, note that DHCP 15 encapsulates and

unencapsulates to various IP data in order to establish connection or communicate

between the various network devices, the various CM 16 and the DHCP 15.

Fijolek fails to explicitly teach establishing a subnet connection for transporting IP data from a server in the headend to the external network.

However, note **Maeshima et al** reference figure 1, disclose method for constructing a virtual private network (VPN), logical connection "subnet connection" where an IP tunnel is constructed, between routers connected with the Internet, by setting up a reservation resource protocol (RSVP) on the IP tunnel (figs. 9(a), 9(b), 10, col. 3, lines 1-33 and col. 4, lines 45-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Maeshima into the system of Fijolek in order to provide a logical connection or virtual connection by virtually constructing a dedicated line(s) on the Internet between Client(s) and specific server(s) to assure and/or reserve bandwidth in each host and/or in each sub-network or each Subscriber.

Claim 13 is met as previously discussed with respect to claim 3.

Claim 14 is met as previously discussed with respect to claim 4.

Claim 15 is met as previously discussed with respect to claim 5.

Claim 16 is met as previously discussed with respect to claim 7.

Claim 17 is met as previously discussed with respect to claim 6.

As to claim 18, note the **Fijolek et al** reference figures 1 and 2, disclose a system and method for managing channel usage in a data over cable system and further disclose an application server for establishing and using an Internet Protocol data communications route within a television system between the application server and an authorized Home Communications Terminal and between the application server

and an external network. The claimed application server comprising... is met as follows: the claimed "means for establishing..." is inherent to DHCP proxies 15, note figures 1, 7 and col. 4, lines 40-57 and col. 5, line 43-col. 6, line 12, note that the DHCP proxies 15, is a means for establishing a communication route between an external network, Data Net 28, and the application server, DHCP proxies 15, located in the Headend or TRTS 26 of the television system, Cable Net 14, and a means for receiving a request for an Internet Protocol (IP) connection from an authorized Home Communications Terminal, Cable Modem (CM) 16, note col. 11, line 56-col. 12, line 4, the claimed "means for requesting establishment..." is inherent to DHCP proxies 15, note col. 7, lines 18-67 and col. 11, line 56-col. 12, line 4, note that the DHCP 15 after receiving a request from Cable Modem (CM) 16 for connection to external network, Data Net 28, requests the establishment of an internal communications route, between the CM 16 requesting an IP connection and DHCP proxies 15, for IP data within the television system, Cable Net 14, between the application server, DHCP proxies 15, and the authorized Home Communications Terminal, Cable Modem (CM) 16, where the internal communications route requested is based on the type of IP data connection required by the authorized CM 16, where at least a portion of the internal communications route is adapted to carry a plurality of IP datagrams destined for a plurality of unicast IP addresses, note col. 7, line 52-col. 8, line 12, line 25-45, the claimed "means for assigning..." is inherent to DHCP proxies 15, note col. 6, lines 1-12, note that the DHCP 15 assigns IP address to the authorized CM 16 for the duration of the IP connection, the claimed "a memory for maintaining a database..." is inherent to DHCP proxies 15, note col. 6, lines 1-12 and

lines 55-67, note that in order for the DHCP tell which computer device to assigning IP

address the DHCP 15 maintains a database in the Headend and to enable it to map the

various physical addresses, MAC addresses of the Cable Net advices, CM 16, to the

various assign IP addresses by DHCP, and further to enable bi-directional

communication between the Cable Net 14 and Data Net 28, note col. 4, lines 40-54, the

claimed "means for encapsulating the IP data..." is inherent to DHCP 15, note col. 7,

lines 18-57, note that the DHCP 15 encapsulates the IP data from the external network,

Data Net 28, for communication between the CM 16 and the unencapsulates the IP

data received from the CM 16 for communication to the Data Net 28, and further

releases the internal communications route for IP data upon termination of the IP

connection, note figure 7, col. 7, lines 18-57 and col. 18, line 60-col. 19, line 21.

Fijolek fails to explicitly teach establishing a subnet connection for transporting IP

data from a server in the headend to the external network.

However, note **Maeshima et al** reference figure 1, disclose method for

constructing a virtual private network (VPN), logical connection "subnet connection"

where an IP tunnel is constructed, between routers connected with the Internet, by

setting up a reservation resource protocol (RSVP) on the IP tunnel (figs. 9(a), 9(b), 10,

col. 3, lines 1-33 and col. 4, lines 45-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to incorporate the teaching of Maeshima into the system of Fijolek in

order to provide a logical connection or virtual connection by virtually constructing a

dedicated line(s) on the Internet between Client(s) and specific server(s) to assure

and/or reserve bandwidth in each host and/or in each sub-network or each Subscriber.

Claim 19 is met as previously discussed with respect to claim 3.

Claim 20 is met as previously discussed with respect to claim 6.

As to claim 21, note the **Fijolek et al** reference figures 1 and 2, disclose a

system and method for managing channel usage in a data over cable system and

further disclose a subscriber system for communicating Internet Protocol data with an

external network. The claimed system comprising...is met as follows: the claimed "a

Home Communication Terminal..." is met by Cable Modem (CM) 16, note figure 1, 2

and col. 5, lines 6-35, col. 6, line 25-37 and col. 7, lines 18-43, note that the CM 16

interface 48 is data link layer 42, PPP, layer use to encapsulate datagrams over the

communication link, note also col. 15, lines 10-21, the claimed "an interface to an

external..." is met by DHCP server 15, note col. note figures 1, 7 and col. 4, lines 40-53

and col. 5, line 66-col. 6, line 12, note that the DHCP is an interface to an external

network, Data Net 28, and CM 16, for communicating the Internet Protocol (IP) data

with the Data Net 28, the where the connection identifies at least one IP address that

will be used between the Data Net 28 and the Headend or TRTS 26, the claimed

"means for establishing, maintaining, communicating over, and releasing..." is inherent

to DHCP server 15, note col. 7, lines 18-66 and col. 11, line 43-col.12, line 8, note that

the DHCP 15, establishes, maintains, communicates and releases communications

route form the application server, DHCP proxies 15, to CM 16 within the subscriber

television system, where at least a portion of the internal communications route is

adapted to carry a plurality of IP datagrams destined for a plurality of unicast IP

addresses, note col. 7, line 52-col. 8, line 12, line 25-45, the claimed "means for

encapsulating the IP data..." is inherent to DHCP 15, note col. 7, lines 18-57, note that

the DHCP 15 encapsulates the IP data from the external network, Data Net 28, for

communication between the CM 16 and the unencapsulates the IP data received from

the CM 16 for communication to the Data Net 28, and further releases the internal

communications route for IP data upon termination of the IP connection, and a

transmission network, Cable Net 14, for connecting the CM 16, to the Headend or TRTS

26, note figure 7, col. 7, lines 18-57 and col. 18, line 60 col. 19, line 21.

Fijolek fails to explicitly teach establishing a subnet connection for transporting IP

data from a server in the headend to the external network.

However, note **Maeshima et al** reference figure 1, disclose method for

constructing a virtual private network (VPN), logical connection "subnet connection"

where an IP tunnel is constructed, between routers connected with the Internet, by

setting up a reservation resource protocol (RSVP) on the IP tunnel (figs. 9(a), 9(b), 10,

col. 3, lines 1-33 and col. 4, lines 45-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to incorporate the teaching of Maeshima into the system of Fijolek in

order to provide a logical connection or virtual connection by virtually constructing a

dedicated line(s) on the Internet between Client(s) and specific server(s) to assure

and/or reserve bandwidth in each host and/or in each sub-network or each Subscriber.

Claim 22 is met as previously discussed with respect to claim 3.

Claim 23 is met as previously discussed with respect to claim 4.

As to Claim 24, the claimed "subscriber television system controller... is inherent

the Cable Modem 16, as previously discussed with respect to claim 1.

As to Claim 25, Fijolek further discloses where the continuous feed session

supports multicast IP data from the external network, note col. 15, line 10-col. 16,

line 39.

As to claim 26, Fijolek further discloses where the means for establishing,

maintaining, communicating over, and releasing the communications route uses at least

a portion of the continuous feed session, note col. 7, lines 18-66 and col. 11, line 43-

col.12, line 8, note that the DHCP 15, establishes, maintains, communicates and

releases communications route form the application server, DHCP proxies 15 to CM 16,

using at least a portion of a continuous feed session.

Claim 27 is met as previously discussed with respect to claim 7.

As to claim 28, Fijolek further discloses where the means for establishing,

maintaining, communicating over, and releasing the communications route allows the

Data Net 28 using DHCP to assign an IP address to the CM 16, note col. 7, lines 18-66

and col. 11, line 43-col.12, line 8.

Claim 29 is met as previously discussed with respect to claim 4.

Claim 30 is met as previously discussed with respect to claim 8.

As to claim 31, Fijolek further discloses where the means for establishing,

maintaining, communicating over, and releasing the communications route is

responsive to the tuning of the CM 16 and modifies the communications route based on

the CM 16, note col. 8, lines 1-45 and col. 9, lines 13-35.

Claim 31 is met as previously discussed with respect to claim 4.

Claim 32 is met as previously discussed with respect to claim 6.

Response to Arguments

4.   Applicant's arguments with respect to claims 1-32 have been considered but are

moot in view of the new ground(s) of rejection. Applicants, argues that the prior art,

Laubach, used in the previous Office Action, establishes virtual connection or logical

connection using MAC addresses in ATM and hence does not teach "establishing a

subnet address," which is part of IP address. This limitation is met by the teaching of

Fijolek in view of Maeshima discussed below. This is Non-Final Office Action.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Furuno et al (6,658,001) disclose path setting method, communication unit and

storage medium.

McAllister et al (6,501,755) disclose stacked address transport in connection

oriented networks.

Killian (6,473,426) discloses transferring messages in networks made up of sub-

networks with different namespaces.

Blahut et al (6,065,061) disclose Internet protocol based network architecture for

cable television access with switched fallback.

Nordman (6,061,346) disclose secure access method, and associated apparatus, for accessing a private IP network.

McCann et al (6,052,725) disclose non-local dynamic Internet protocol addressing system and method.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q Shang** whose telephone number is **703-305-2156**. The examiner can normally be reached on **700am-500pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W Miller** can be reached on **703-305-4795**. The fax phone number for the organization where this application or proceeding is assigned is **703-746-5991.**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Customer Service** whose telephone number is **703-306-0377.**

Annan Q. Shang

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600